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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/752,603

01/07/2004

Donald H. Keskula

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05/14/2004

(H-20442)

EXAMINER

HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 828

BLOOMFIELD HILLS, MI 48303

TIBBITS, PIA FLORENCE

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/752,603	Applicant(s) KESKULA ET AL.	
	Examiner Pia F Tibbits	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/7/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2838

DETAILED ACTION

This Office action is in answer to the preliminary amendment filed 1/7/2004. Claims 1-10 were canceled, and claims 11-22 were added.

Claim Objections

1. Claim 11 is objected to because of the following informalities: applicant needs to use consistent language through out the claims. For example, "actual stack operating voltage" should be recited as such, and not as "actual operating voltage". Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 11-22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6692851. Although the conflicting claims are not identical, they are not patentably distinct from each other because they describe a method for operating a fuel cell system with a fuel cell stack that supplies electrical power to an external load, comprising: monitoring actual stack operating voltage that is produced by said fuel cell stack; monitoring actual stack operating current that is produced by said fuel cell stack; looking up an expected stack voltage in a lookup table using said actual operating current of said fuel cell stack as a first lookup table reference; and generating a first signal if said actual voltage signal exceeds said high operating voltage value.

Art Unit: 2838

With regard to the patent looking up an expected stack voltage **and** a high voltage variation limit in a lookup table using said actual operating current of said fuel cell stack as a first lookup table reference, i.e., looking up two variables instead of one in the look-up table, absent any criticality, is only considered to be the use of "optimum" or "preferred" design that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the fuel stack disclosed by the patent, since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known design on the basis of its suitability for the intended use of the invention. See *In re Leshin*, 125 USPQ 416.

With regard to the patent dividing said actual voltage by said expected voltage to generate an actual voltage variation signal: by eliminating one method step, cited in the 6692851 reference, applicant neither extends the life of the fuel cells being charged, nor makes it easier to monitor the fuel stack, which is the object of his invention, as cited in the disclosure. Therefore it would be obvious to one skilled in the art at the time the invention was made that the elimination of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. See *In Re Karlson*, 136 USPQ 184 (CCPA 1963), *In Re Wilson*, 153 USPQ 740 (CCPA 1967), and *Ex Parte Rainu*, 168 USPQ 375 (PTO Bd. of App. 1969).

With respect to the patent using a high voltage variation limit to monitor a fuel stack, absent any criticality, is only considered to be the use of "optimum" or "preferred" design that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the fuel stack disclosed by the patent, since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known design on the basis of its suitability for the intended use of the invention. See *In re Leshin*, 125 USPQ 416.

As to claims 15 and 19, with regard to the limitation of having a hydrogen source: it is an inherent function of the fuel cell to have a hydrogen source which is oxidized to produce fuel, and MPEP 2100 states that the disclosure of a limitation may be expressed, implicit or **inherent**.

Art Unit: 2838

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is (571) 272-2086. If unavailable, contact the Supervisory Patent Examiner Mike Sherry whose telephone number is (571) 272-2084.
6. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-2800. Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 872-9306.

PFT

May 8, 2004

A handwritten signature or mark, possibly a stylized 'P' or 'F', is located to the right of the date.